

CLAIMS

1. A tinted polyester resin composition comprising an aromatic polyester polymer and a tinting agent, wherein

5 (a) the tinting agent is present in a content of 0.1 to 10 ppm by mass,

(b) a maximum absorption wavelength of the tinting agent in an absorption spectrum in the wavelength range of 380 to 780 nm is in the range of 540 to 600 nm, determined in a chloroform solution of the tinting agent in a concentration of 20 mg/liter and at an optical path having a length of 1 cm, and

10 (c) ratios of optical absorbances A_{400} , A_{500} , A_{600} and A_{700} of visible light spectra at wavelengths of 400 nm, 500 nm, 600 nm and 700 nm respectively to an optical absorbance A_{max} in the visible light spectrum at the maximum absorption wavelength, of the tinting agent, determined in the above-mentioned chloroform solution of the tinting agent at the optical path having a length of 1 cm, satisfy the requirements (1) to (4):

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$$0.00 \leq A_{400}/A_{max} \leq 0.20 \quad (1)$$

$$0.10 \leq A_{500}/A_{max} \leq 0.70 \quad (2)$$

$$0.55 \leq A_{600}/A_{max} \leq 1.00 \quad (3)$$

$$0.00 \leq A_{700}/A_{max} \leq 0.05 \quad (4)$$

25 2. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the tinting agent is selected from tinting coloring matters having a mass reduction-initiating temperature of 250°C or more, determined by heating the coloring matters in a nitrogen gas atmosphere at a temperature-increasing rate of 10°C/minute while measuring the mass of the coloring matters by using a thermobalance.

30 3. The tinted aromatic polyester resin composition as claimed in claim 1, wherein a cobalt metal element in the composition is present in a content controlled to 10 ppm by mass or less on the basis of the mass of the

composition.

4. The tinted aromatic polyester resin composition as claimed in claim 1, wherein a metal element having a true specific gravity of 5.0 or more, in the composition, is present in a content controlled to 10 ppm by mass on the basis of the mass of the composition.

5. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the aromatic polyester polymer is one produced by using a catalyst comprising at least one member selected from titanium compounds and aluminum compounds.

6. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the aromatic polyester polymer is one produced by using a catalyst comprising at least one member selected from titanium compounds and phosphorus compounds; a molar ratio of phosphorus atoms to titanium atoms contained in the catalyst satisfies the requirement (5):

$$1 \leq M_p/M_{Ti} \leq 15 \quad (5)$$

wherein M_p and M_{Ti} respectively represent contents in millimoles of phosphorus element and titanium atoms contained in the aromatic polyester polymer; and the molar amount of the titanium metal element in the residual catalyst dissolved and contained in the polyester resin composition is in the range of 2×10^{-3} to $15 \times 10^{-3}\%$ on the basis of the molar amount of all dicarboxylic acids contained, as a polyester-constituting component, in the above-mentioned polymer.

7. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the aromatic polyester polymer comprises, as a principal component, at least one member selected from the group consisting of polyethylene terephthalate, polyethylene naphthalate, polytrimethylene terephthalate, polytrimethylene naphthalate, polytetramethylene terephthalate and polytetramethylene naphthalate.

8. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the tinting agent comprises a blue color-tinting coloring matter and a violet color-tinting coloring matter in a mass ratio in the range of from 90:10 to 40:60.

9. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the tinting agent comprises a blue color-tinting coloring matter and a red or orange color-tinting coloring matter in a mass ratio in the range of from 98:2 to 80:20.

10. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the tinting agent is one mixed, at one or more stages in the production procedure of the aromatic polyester polymer, into a reaction mixture in the production procedure.

11. The tinted aromatic polyester resin composition as claimed in claim 1, wherein the tinting agent is one knead-mixed into the aromatic polyester polymer in the state of a melt.

12. A tinted and shaped polyester resin article produced from the tinted polyester resin composition as defined in any one of claims 1 to 11.

13. The tinted and shaped polyester resin article as claimed in claim 12, selected from fiber products.

14. The tinted and shaped polyester resin article as claimed in claim 12, selected from film products.

15. The tinted and shaped polyester resin article as claimed in claim 12, selected from bottle products.